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ATTACHMENT D  
SIGNIFICANT VARIATIONS AND THEIR CONSEQUENCES

1. Recording Time

In increasing the recording time it is necessary to change the speed of the machine from 7.5 inches per second (of tape travel) to 1-7/8 inches per second. In reducing the speed, however, you reduce the quality of your recording. The Revere unit used maintains its frequency at 7500 cycles per second (fidelity) which is adequate for speech. The LSD believes a higher cycles per second may be necessary || for certain languages.

At its slower speed 5" reels are used in place of 7" reels which lower the weight and size of the unit. Tape speed and size varies with that used by LSD.

Increasing the time to one hour eliminates changing or adjusting the machine during the lesson.

Number of Channels

The master can be made on either channel of the unit. In the prototype, elimination of the two channel record capability decreases the possibility of the operator erasing the master. Once the master is made the machine is used as an ordinary tape recorder involving the use of switches normally found on most recorders.

Frequency

Tape recorders in this price range usually have a rating of 7000 cycles per second. Though the increase to 7500 cycles per second is not audible, it still does not go below 7000 cycles per second which would be audible and less effective to the human ear.

Bias and Erase Frequency

There is no appreciable difference in fidelity or operation in this change.

Recording Level Indicator

There is no appreciable difference in fidelity or operation in using the cathode ray or neon tube. The neon is used because it comes with the Revere machine.

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Power Requirements

By the addition of a universal motor designed by ASD, the usefulness of the machine can extend to any part of the world. It also can operate on DC current and through a converter can be operated from a car battery. The size and weight of this motor are such that it can be fitted to the underhousing of the recording unit without any difficulty or interference with the units' performance.

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2. Automatic film strip projector - not applicable.
3. Five headsets - not applicable.

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